AMENDMENTS TO THE CLAIMS:

Please replace the claims with the following rewritten listing:

1. – 51.   (Cancelled)

52. (Currently Amended) Apparatus for monitoring muscle activity ~~so as to detect a particular muscle activity and to distinguish the occurrence of said particular muscle activity from the occurrence of at least one other muscle activity~~relating to bruxism of a user, said apparatus comprising

    - means for providing signals indicative of muscle activity,

    - means for processing of said signals in order to detect ~~said particular activity~~bruxism, ~~and~~

    - means for providing a feedback signal,

    wherein ~~said~~ the apparatus is designed in order to be operated in a set-up mode and a use-mode, and

    wherein said apparatus is designed to be individually adaptable in said set-up mode, wherein a normally occurring muscle activity and a maximal muscle activity are measured and registered and used to calculate a threshold value for outputting of the feedback signal, whereby a criteria is established for releasing a feedback to the user in such a manner that the criteria is adapted to the user~~operable in a set-up mode and in a use mode, said set-up mode being distinct from said use mode,~~

    ~~and wherein, in said set-up mode, said apparatus is user controllable to receive as a first reference input signals from said means for providing signals which are indicative of said other muscle activity and to separately receive second reference input signals from said means for providing signals which are indicative of said particular muscle activity,~~

    ~~and wherein said apparatus is configured in said set-up mode to process said first reference signals and said second reference signals to identify therefrom at least one distinguishing criterion which differentiates said first reference input signals from said second reference input signals,~~

and wherein in said use mode said apparatus is configured to provide said feedback signal in response to detecting presence of in signals received from said means for providing signals of said at least one distinguishing criterion identified in the set-up mode in signals received from said means for providing signals.

53-55. (Cancelled)

56. (Previously Presented) Apparatus according to claim 52, wherein said apparatus comprises means for registering and storing said signals indicative of muscle activity during a time interval.

57. (Previously Presented) Apparatus according to claim 52, wherein said apparatus is adaptable by having means for adjusting the intensity of said feedback signal.

58. (Currently Amended) Apparatus according to claim 52, wherein said means for processing of said signals in order to detect a particular activitybruxism comprises means for pattern recognition.

59. (Previously Presented) Apparatus according to claim 52, wherein said means for providing signals indicative of muscle activity comprises one or more electrodes for sensing of EMG-signals.

60. (Previously Presented) Apparatus according to claim 52, wherein said means for providing signals indicative of muscle activity comprises one or more electrodes for sensing of EEG-signals.

61. (Previously Presented) Apparatus according to claim 60, wherein said apparatus comprises means for testing said electrodes and in particular the connectivity to the user by supplying a test voltage or test current to one or more electrodes, measuring the resulting current or required voltage and comparing the result with reference value(s).

62. (Previously Presented) Apparatus according to claim 52, wherein said means for providing signals indicative of muscle activity comprises a microphone, a sensor for sensing of vibrations and/or other sensor means.

63. (Previously Presented) Apparatus according to claim 52, wherein said apparatus comprises means for storing data corresponding to measured and/or processed signals.

64. (Previously Presented) Apparatus according to claim 63, wherein the apparatus further comprises a computer and means for transferring stored data thereto.

65. (Previously Presented) Apparatus according to claim 52, wherein said apparatus comprises a user module for wearing on the head.

66. (Previously Presented) Apparatus according to claim 52, wherein said apparatus comprises a slave module and a master module, said slave module being designed for wearing by a human being.

67. (Previously Presented) Apparatus according to claim 52, wherein said apparatus comprises display means for displaying instructions and/or results stemming from a monitoring session.

68. (Currently Amended) A method for monitoring muscle activity ~~so as to detect a particular said muscle activity and to distinguish the occurrence of particular muscle activity from the occurrence of at least one other muscle activity~~relating to bruxism of a user, said method comprising

    providing signals indicative of muscle activity,

    processing of said signals in order to detect bruxism,

    providing a feedback signal in case of detection of bruxism, and

    during a set-up mode:

measuring and registering a normally occurring muscle activity and a maximal muscle activity, and

using said registered muscle activities to calculate a threshold value for outputting of the feedback signal, whereby a criteria is established for releasing a feedback to the user in such a manner that the criteria is adapted to the user.

~~- receiving signals indicative of muscle activity,~~

~~- processing said signals in order to detect said particular activity, and~~

~~- providing a feedback signal,~~

~~wherein said apparatus is operated in a set-up mode and in a use mode, said set-up mode being distinct from said use mode,~~

~~and wherein, in said set-up mode, said apparatus is user controlled to receive as a first reference input signals from said means for providing signals which are indicative of a said other muscle activity and to separately receive as a second reference input signals from said means for providing signals which are indicative of said particular muscle activity,~~

~~and wherein said apparatus is configured in said set-up mode to process said first reference signals and said second reference signals to identify therefrom at least one distinguishing criterion which differentiates said first reference input signals from said second reference input signals,~~

~~and wherein in said use mode said apparatus is configured to provide said feedback signal in response to detecting in the provided signals said at least one distinguishing criterion identified in the set-up mode.~~

69. (Currently Amended) A method as claimed in claim ~~56~~68, wherein the threshold value is calculated automatically, preferably based on measurements of the muscle activity~~said registered and stored signals indicative of muscle activity are processed by FFT analysis~~.

70. (New) Apparatus according to claim 52, further comprising means for calculating the threshold value automatically, preferably based on measurements of the muscle activity.

71. (New) Apparatus according to claim 52, wherein the calculated threshold value corresponds to between 3% and 20% of the maximal muscle activity.

72. (New) Apparatus according to claim 52, wherein the threshold value is retrieved from a memory in which said threshold value has been stored earlier

73. (New) Apparatus according to claim 52, wherein said normally occurring muscle activity is one or more grimaces performed by the user.

74. (New) Apparatus according to claim 52, wherein said essentially maximal muscle activity is an essentially maximal jaw clenching performed by the user.

75. (New) Apparatus according to claim 52, wherein said means for processing of said signals in order to detect a particular undesired activity comprises means for performing a FFT (Fast Fourier Transform) analysis of said signals.

76. (New) Apparatus according to claim 52, further comprising means for frequency pattern recognition of said signals.

77. (New) Apparatus according to claim 52, wherein said means for processing of said signals comprises means for determining the amplitude of the frequency content of said signals.

78. (New) Apparatus according to claim 52, wherein said means for processing of said signals comprises means for low-pass filtering said signals, thereby filtering out noise and unusable signals.

79. (New) Apparatus according to claim 52, wherein said means for processing of said signals comprises means for averaging and rectifying said signals.

80. (New) Apparatus according to claim 52, further comprising means for accumulating data of, and means for determining and storing the frequency pattern of the muscle activity relating to bruxism.

81. (New) Apparatus according to claim 52, wherein the means for frequency pattern recognition comprises means for comparing the frequency content of said signals to the stored frequency pattern of the muscle activity relating to bruxism.

82. (New) Apparatus according to claim 52, wherein the means for frequency pattern recognition comprises means for comparing one or more harmonic frequencies of said signals to the stored frequency pattern of the muscle activity relating to bruxism.

83. (New) Apparatus according to claim 52, wherein the first harmonic frequency and/or the second and third harmonic frequencies of said signals are compared to the stored frequency pattern of the muscle activity relating to bruxism.

84. (New) Apparatus according to claim 52, wherein all harmonic frequencies up to the fourth, fifth or up to the sixth harmonic frequency of said signals are compared to the stored frequency pattern of the muscle activity relating to bruxism.